


18. A heat-retaining article worn over a human body surface as described in claim 17, wherein the hydrolysis of uncrosslinked residues introduces between 1.0 to 4.5 meq/g of carboxyl and amido groups.

 19. A heat-retaining article worn over a human body surface as described in claim 17, wherein the crosslinker is selected from the group consisting of hydrazine hydrate, hydrazine sulfate, hydrazine hydrochloride, hydrazine hydrobromide, hydrazine carbonate, a diamino compound, a triamino compound, ethylenediamine, guanidine sulfate, guanidine hydrochloride, guanidine phosphate and melanin.

20. A heat-retaining article worn over a human body surface as described in claim 17, wherein the crosslinking reaction adds between 1 % to 10% by weight nitrogen content to the treated fiber.

21. A heat-retaining article worn over a human body surface as described in claim 16, wherein the heat-retaining fiber comprises feather.

22. A heat-retaining article worn over a human body surface as described in claim 21, wherein the feather and the moisture-absorbing heat generating fiber are prepared in a weight ratio between 9:1 to 6:4, the weight ratio based on the respective weights of the first and second materials at their inherent minimum moisture contents.

23. A heat-retaining article worn over a human body surface as described in claim 21, wherein the feather and the polyacrylate-series fiber are blended without a binder.

24. A heat-retaining article worn over a human body surface as described in claim 16, wherein both the outer material and lining are moisture-permeable.

25. A heat-retaining article worn over a human body surface as described in claim 16, wherein both the outer material and lining are wind proof.

26. A heat-retaining article worn over a human body surface as described in claim 16, wherein the moisture-absorbing heat generating fiber comprises a material selected from the group consisting of a fine powder of a desiccant, synthetic silica gel, natural silica-alumina series desiccant, ceramic-series desiccant and molecular sieve.

27. A method for producing a moisture-absorbing heat generating intermediate material useful for manufacture of a heat-retaining article worn over a human body surface, the intermediate material comprising a first moisture-absorbing heat generating fiber and a second fiber material, the method comprising the steps of:

drying at least the first moisture-absorbing heat generating fiber to an inherent minimum moisture content; and

blending the first and second fibers in a prescribed weight ratio.

28. The method of claim 27, wherein the first moisture-absorbing heat generating fiber comprises a polyacrylate-series fiber prepared from acrylic fiber by crosslinking the polyacrylate-series fiber followed by hydrolysis of remaining crosslinking residues to introduce between 1.0 to 4.5 meq/g of carboxyl and amido groups into the fiber.

29. The method of claim 28, wherein the first moisture-absorbing heat generating fiber contains between 1 % to 10% by weight nitrogen content added by the crosslinking reaction.


30. A method for producing a moisture-absorbing heat generating intermediate material useful for manufacture of a heat-retaining article worn over a human body

surface, the intermediate material comprising a first moisture absorbing heat generating fiber and a second fiber material, the method comprising the steps of:

drying the first moisture-absorbing heat generating fiber by heating to an inherent minimum moisture content of the fiber while removing water;

cooling the moisture-absorbing heat generating fiber with dry air; and

blending the two fibers and dispersing them into the intermediate material homogenously.



31. The method of claim 30, wherein the first moisture-absorbing heat generating fiber comprises a polyacrylate-series fiber prepared from acrylic fiber by crosslinking the polyacrylate-series fiber followed by hydrolysis of remaining crosslinking residues to introduce between 1.0 to 4.5 meq/g of carboxyl and amido groups into the fiber.

32. The method of claim 31, wherein the first moisture-absorbing heat generating fiber contains between 1 % to 10% by weight nitrogen content added by the crosslinking reaction.

33. The method of claim 30, further comprising the step of:

drying the second fiber material by heating to an inherent minimum moisture content of the fiber while removing water; and

cooling the dried second fiber material with dry air prior to blending the two fibers on a weight basis.

34. The method of claim 30, further comprising the step of compounding the first and second fiber materials in a prescribed weight ratio prior to blending and dispersing them into the intermediate material homogeneously.

35. The method of claim 30, wherein blending of the two fibers is carried out without